**UNITED STATES DEPARTMENT OF COMMERCE**
**Patent and Trademark Office**

Address : COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. |
|---|---|---|---|
| 07/971,242 | 09/08/92 | INUSHIMA T | 0756-775 |

EXAMINER: GOUDREAU, G

D1M1/0422

GERALD J. FERGUSON, JR.
SIXBEY, FRIEDMAN, LEEDOM & FERGUSON
2010 CORPORATE RIDGE, SUITE 600
MCLEAN, VA 22102

| ART UNIT | PAPER NUMBER |
|---|---|
| 1109 | 9 |

DATE MAILED: 04/22/94

This is a communication from the examiner in charge of your application.
COMMISSIONER OF PATENTS AND TRADEMARKS

☐ This application has been examined ☐ Responsive to communication filed on _____ ☒ This action is made final.

A shortened statutory period for response to this action is set to expire 3 month(s), _____ days from the date of this letter.
Failure to respond within the period for response will cause the application to become abandoned. 35 U.S.C. 133

**Part I THE FOLLOWING ATTACHMENT(S) ARE PART OF THIS ACTION:**

1. ☐ Notice of References Cited by Examiner, PTO-892.
2. ☐ Notice re Patent Drawing, PTO-948.
3. ☐ Notice of Art Cited by Applicant, PTO-1449.
4. ☐ Notice of Informal Patent Application, Form PTO-152.
5. ☐ Information on How to Effect Drawing Changes, PTO-1474.
6. ☐ _____

**Part II SUMMARY OF ACTION**

1. ☒ Claims 16-31 are pending in the application.
   Of the above, claims 31 are withdrawn from consideration.
2. ☒ Claims 1-15 have been cancelled.
3. ☒ Claims 17,22,24 are allowed.
4. ☒ Claims 16,18-21,23,25-28,30 are rejected.
5. ☒ Claims 29 are objected to.
6. ☐ Claims _____ are subject to restriction or election requirement.
7. ☐ This application has been filed with informal drawings under 37 C.F.R. 1.85 which are acceptable for examination purposes.
8. ☐ Formal drawings are required in response to this Office action.
9. ☐ The corrected or substitute drawings have been received on _____. Under 37 C.F.R. 1.84 these drawings are ☐ acceptable. ☐ not acceptable (see explanation or Notice re Patent Drawing, PTO-948).
10. ☐ The proposed additional or substitute sheet(s) of drawings, filed on _____ has (have) been ☐ approved by the examiner. ☐ disapproved by the examiner (see explanation).
11. ☐ The proposed drawing correction, filed on _____, has been ☐ approved. ☐ disapproved (see explanation).
12. ☒ Acknowledgment is made of the claim for priority under U.S.C. 119. The certified copy has ☒ been received ☐ not been received
    ☐ been filed in parent application, serial no. _____; filed on _____.
13. ☐ Since this application appears to be in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under Ex parte Quayle, 1935 C.D. 11; 453 O.G. 213.
14. ☐ Other

EXAMINER'S ACTION

15. Restriction to one of the following inventions is required under 35 U.S.C. § 121:

I. Claims 16-30, drawn to a method for CVD depositing $SiO_2$, classified in Class 427, subclass 38(+).

II. Claim 31, drawn to a device, classified in Class 257, subclass 207-211.

Inventions I and II are related as process of making and product made. The inventions are distinct if either or both of the following can be shown: (1) that the process as claimed can be used to make other and materially different product or (2) that the product as claimed can be made by another and materially different process (M.P.E.P. § 806.05(f)). In the instant case the product as claimed can be made by another materially different process such as with different energy sources (i.e.- heat/or different CVD gasses (i.e. - $SiH_4$, ect.).

Because these inventions are distinct for the reasons given above and the search required for group II is not required for Group I, restriction for examination purposes as indicated is proper.

During a telephone conversation with attorney Jeff Costellio on 2-25-94 a provisional election was made with traverse to prosecute the invention of a method for CVD depositing $SiO_2$,

claim 16-30. Affirmation of this election must be made by applicant in responding to this Office action. Claim 31 is withdrawn from further consideration by the Examiner, 37 C.F.R. § 1.142(b), as being drawn to a non-elected invention.

16. The following is a quotation of 35 U.S.C. § 103 which forms the basis for all obviousness rejections set forth in this Office action:

> A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.
> Subject matter developed by another person, which qualifies as prior art only under subsection (f) or (g) of section 102 of this title, shall not preclude patentability under this section where the subject matter and the claimed invention were, at the time the invention was made, owned by the same person or subject to an obligation of assignment to the same person.

Evaluations of the level of ordinary skill in the art requires consideration of such factors as various prior art approaches, types of problems encountered in the art, rapidity with which innovations are made, sophistication of technology involved, educational background of those actively working in the field, commercial success, and failure of others.

The "person having ordinary skill" in this art has the capability of understanding the scientific and engineering principles applicable to the claimed invention. The evidence of record including the references and/or the admissions are considered to reasonably reflect this level of skill.

17. Claims 16, 18-21, 23, 30 are rejected under 35 U.S.C. § 103 as being unpatentable over the references as applied in paragraph 16 of the previous office action.

18. Claims 25-28 are rejected under 35 U.S.C. § 103 as being unpatentable over the references as applied in paragraph 18 of the previous office action.

19. Claims 17, 22, 24 are allowable over the prior art of record.

20. Claim 29 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

21. Applicant's arguments filed 1-19-94 have been fully considered but they are not deemed to be persuasive.

The applicant argues the following points regarding the Examiners rejection of their claimed subject matter:

- The Ivanov et al. reference, contrary to what the Examiner purports, teach a non-plasma CVD $SiO_2$ deposition process when they use the term "electrodeless";

- The Examiner has incorrectly applied case law to justify performing two processes simultaneously which were previously performed separately for the same reason when the case law in

fact only justifies the substitution of one type step for another type of step. The Examiner must disagree.

First Ivanov et al. clearly forms a plasma discharge. Further, although the plasma formed by Ivanov et al does not involve the usage of electrodes inserted directly into the plasma to form the plasma; it still would have to be formed by some type of a electrical discharge". This is based on the fact that plasmas by definition consist of an electrically discharged gas and thus inherently would not applicant's claimed limitation regardless of the method of forming the plasma (i.e.- microwave, ect.).

Second, the examiner has correctly applied In re Novak and In re Crokelt contrary to what applicant purports based on post P.T.O. board of appeal decisions.

22. THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 C.F.R. § 1.136(a).

A SHORTENED STATUTORY PERIOD FOR RESPONSE TO THIS FINAL ACTION IS SET TO EXPIRE THREE MONTHS FROM THE DATE OF THIS ACTION. IN THE EVENT A FIRST RESPONSE IS FILED WITHIN TWO MONTHS OF THE MAILING DATE OF THIS FINAL ACTION AND THE ADVISORY ACTION IS NOT MAILED UNTIL AFTER THE END OF THE THREE-MONTH SHORTENED STATUTORY PERIOD, THEN THE SHORTENED STATUTORY PERIOD WILL EXPIRE ON THE DATE THE ADVISORY ACTION IS MAILED, AND ANY EXTENSION FEE PURSUANT TO 37 C.F.R. § 1.136(a) WILL BE CALCULATED FROM THE MAILING DATE OF THE ADVISORY ACTION. IN NO EVENT WILL THE STATUTORY PERIOD FOR RESPONSE EXPIRE LATER THAN SIX MONTHS FROM THE DATE OF THIS FINAL ACTION.

23. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner G. Goudreau whose telephone number is (703) 308-1915.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 308-0661.

R. BRUCE BRENEMAN
Supervisory Patent Examiner
Art Unit 1109

G. Goudreau:rg
April 20, 1994